

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method of managing software components, said method comprising:

deploying one or more software components on a plurality of computer platforms wherein said components interoperate with each other to execute a business application;

monitoring said components with an Administrator, said Administrator functioning independently of said components, said Administrator comprising a Central Administrator and a plurality of Distributed Administrators where each computer platform has one of the Distributed Administrators;

determining a need to reconfigure one or more said components based upon a health status message from an agent in a computer platform to a Distributed Administrator in the computer platform, based upon a process schedule check of the computer platform by the Distributed Administrator, or based upon a health status message from each Distributed Administrator to the Central Administrator;

wherein the Distributed Administrator is a process manager for a process of the agent;

wherein the each of the components is managed by an associated container and runs in the context of the agent; wherein the container receives and processes life-cycle messages and other administrative messages from the Central

Administrator to one of the components and provides a thread of execution to one of the components; and wherein the agent can read and respond to the messages; and

modifying or replacing one or more said components using said Administrator in response to said determining; wherein said monitoring, said determining, and said modifying are performed without reference to said computer platforms and wherein said modifying or replacing reconfigures said business application without terminating said business application;

wherein said modifying or replacing one or more said components comprises:

sending, by the Central Administrator, configuration information and a message indicating that a component is to be modified or replaced, where the message is sent to a queue of the component;

reading, by a container, the message from the queue, and passing, by the container, the configuration information to the component; and

controlling, by the Central Administrator, the modifying or replacing of the component.

Claim 2 (original): The method of Claim 1, wherein two or more of said plurality of computer platforms are geographically separated from each other.

Claim 3 (cancelled)

Claim 4 (cancelled)

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Claim 5 (original): The method of Claim 1, wherein said monitoring comprises receiving health status messages each containing only changes in health status since receipt of a last health status message.

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Claim 6 (currently amended): A computer system for managing software components, comprising computer instructions for:

deploying one or more software components on a plurality of computer platforms wherein said components interoperate with each other to execute a business application;

monitoring said components with an Administrator, said Administrator functioning independently of said components, said Administrator comprising a Central Administrator and a plurality of Distributed Administrators where each computer platform has one of the Distributed Administrators;

determining a need to reconfigure one or more said components based upon a health status message from an agent in a computer platform to a Distributed Administrator in the computer platform, based upon a process schedule check of the computer platform by the Distributed Administrator, or based upon a health status message from each Distributed Administrator to the Central Administrator;

wherein the Distributed Administrator is a process manager for a process of the agent;

wherein each of the components is managed by an associated container and runs in the context of the agent; wherein the container receives and processes life-cycle messages and other administrative messages from the Central

Administrator to one of the component and provides a thread of execution to one of the component; and wherein the agent can read and respond to the messages; and

modifying or replacing one or more said components using said Administrator in response to said determining; wherein said monitoring, said determining, and said modifying are performed without reference to said computer platforms and wherein said modifying or replacing reconfigures said business application without terminating said business application;

wherein said modifying or replacing one or more said components comprises:

sending, by the Central Administrator, configuration information and a message indicating that a component is to be modified or replaced, where the message is sent to a queue of the component;

reading, by a container, the message from the queue, and passing, by the container, the configuration information to the component; and

controlling, by the Central Administrator, the modifying or replacing of the component.

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Claim 7 (original): The method of Claim 6, wherein two or more of said plurality of computer platforms are geographically separated from each other.

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Claim 8 (cancelled)

Claim 9 (cancelled)

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Claim 10 (original): The method of Claim 6, wherein said monitoring comprises receiving health status messages each containing only changes in said health status since receipt of a last health status message.

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Claim 11 (currently amended): A computer readable storage medium, comprising computer instructions for:

deploying one or more software components on a plurality of computer platforms wherein said components interoperate with each other to execute a business application;

monitoring said components with an Administrator, said Administrator functioning independently of said components, said Administrator comprising a Central Administrator and a plurality of Distributed Administrators where each computer platform has one of the Distributed Administrators;

determining a need to reconfigure one or more said components based upon a health status message from an agent in a computer platform to a Distributed Administrator in the computer platform, based upon a process schedule check of the computer platform by the Distributed Administrator, or based upon a health status message from each Distributed Administrator to the Central Administrator;

wherein the Distributed Administrator is a process manager for a process of the agent;

wherein each of the components is managed by a container and runs in the context of the agent; wherein the container receives and processes life-cycle messages and other administrative messages from the Central Administrator to one of the components and provides a

thread of execution to one of the components; and wherein the agent can read and respond to the messages; and modifying or replacing one or more said components using said Administrator in response to said determining; wherein said monitoring, said determining, and said modifying are performed without reference to said computer platforms and wherein said modifying or replacing reconfigures said business application without terminating said business application;

wherein said modifying or replacing one or more said components comprises:

sending, by the Central Administrator, configuration information and a message indicating that a component is to be modified or replaced, where the message is sent to a queue of the component;

reading, by a container, the message from the queue, and passing, by the container, the configuration information to the component; and

controlling, by the Central Administrator, the modifying or replacing of the component.

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Claim 12 (original): The method of Claim 11, wherein two or more of said plurality of computer platforms are geographically separated from each other. 7

Claim 13 (cancelled)

Claim 14 (cancelled)

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Claim 15 (original): The method of Claim 11, wherein said monitoring comprises receiving health status messages each containing only changes in said health status since receipt of a last health status message.

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Claim 16 (currently amended): A computer data signal embodied in a carrier wave, comprising computer instructions for:

deploying one or more software components on a plurality of computer platforms wherein said components interoperate with each other to execute a business application;

monitoring said with components with an Administrator, said Administrator functioning independently of said components, said Administrator comprising a Central Administrator and a plurality of Distributed Administrators where each computer platform has one of the Distributed Administrators;

determining a need to reconfigure one or more said components based upon a health status message from an agent in a computer platform to a Distributed Administrator in the computer platform, based upon a process schedule check of the computer platform by the Distributed Administrator, or based upon a health status message from each Distributed Administrator to the Central Administrator;

wherein the Distributed Administrator is a process manager for a process of the agent;

wherein each of the components is managed by a container and runs in the context of the agent; wherein the container receives and processes life-cycle messages and

other administrative messages from the Central Administrator to one of the components and provides a thread of execution to one of the components; and wherein the agent can read and respond to the messages; and modifying or replacing one or more said components using said Administrator in response to said determining; wherein said monitoring, said determining, and said modifying are performed without reference to said computer platforms and wherein said modifying or replacing reconfigures said business application without terminating said business application;

wherein said modifying or replacing one or more said components comprises:

sending, by the Central Administrator, configuration information and a message indicating that a component is to be modified or replaced, where the message is sent to a queue of the component;

reading, by a container, the message from the queue,
and passing, by the container, the configuration information to the component; and

controlling, by the Central Administrator, the modifying or replacing of the component.

11 10
Claim 17 (original): The method of Claim 16, wherein two or more of said plurality of computer platforms are geographically separated from each other.

Claim 18 (cancelled)

Claim 19 (cancelled)

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Claim 20 (original): The method of Claim 16, wherein said monitoring comprises receiving health status messages each containing only changes in said health status since receipt of a last health status message.

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Claim 21 (previously presented): The method of claim 1, wherein the software components belong to the business application, and wherein a health status message includes content that is determined by at least one parameter that is critical to the business application.

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Claim 22 (previously presented): The method of claim 1, wherein the software components are developed from a set of base classes that utilize object oriented programming (OOP) methods, in order to deploy a common set of OOP methods across all software components.

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Claim 23 (previously presented): The method of claim 1, wherein an instance of a software component is configured to run as a single thread or as multiple threads within an agent.

Claim 24 (cancelled)

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Claim 25 (previously presented): The method of claim 1, wherein a Distributed Administrator is configured to spawn an agent, in response to an instruction from the Central Administrator.

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Claim 26 (previously presented): The method of claim 25,
wherein the Distributed Administrator passes a
configuration file to the agent, where the configuration
file includes configuration information for the agent.

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Claim 27 (previously presented): The method of claim 1,
wherein the Central Administrator and Distributed
Administrators perform crash recovery for a computer
platform.

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Claim 28 (previously presented): The method of claim 1,
wherein a software component is a simplest addressable
logical element within the business application.

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Claim 29 (currently amended): A method of managing
software components, said method comprising:
deploying one or more software components on a
plurality of computer platforms wherein said components
interoperate with each other to execute a business
application;

monitoring said components with an Administrator, said
Administrator functioning independently of said components,
said Administrator comprising a Central Administrator and a
plurality of Distributed Administrators where each computer
platform has one of the Distributed Administrators;

wherein the Distributed Administrator is a process
manager for a process of the agent;

wherein each of the components is managed by a
container and runs in the context of the agent; wherein the
container receives and processes life-cycle messages and

other administrative messages from the Central Administrator to one of the components and provides a thread of execution to one of the components; and wherein the agent can read and respond to the messages; and

determining a need to reconfigure one or more said components based upon a health status message from an agent in a computer platform to a Distributed Administrator in the computer platform, based upon a process schedule check of the computer platform by the Distributed Administrator, or based upon a health status message from each Distributed Administrator to the Central Administrator; and

modifying or replacing one or more said components using said Administrator in response to said determining;

wherein said modifying or replacing one or more said components comprises:

sending, by the Central Administrator, configuration information and a message indicating that a component is to be modified or replaced, where the message is sent to a queue of the component;

reading, by a container, the message from the queue, and passing, by the container, the configuration information to the component; and

controlling, by the Central Administrator, the modifying or replacing of the component.

31 20
Claim 30 (previously presented): The method of Claim 29, wherein two or more of said plurality of computer platforms are geographically separated from each other.

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Claim 31 (previously presented): The method of Claim 29²⁰, wherein said monitoring comprises receiving health status messages each containing only changes in said health status since receipt of a last health status message.

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Claim 32²⁰ (previously presented): The method of claim 29, wherein a health status message includes content that is determined by at least one parameter that is critical to the business application.

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Claim 33 (previously presented): The method of claim 29²⁶, wherein the software components are developed from a set of base classes that utilize object oriented programming (OOP) methods, in order to deploy a common set of OOP methods across all software components.

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Claim 34²⁰ (previously presented): The method of claim 29, wherein an instance of a software component is configured to run as a single thread or as multiple threads within an agent.

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Claim 35²⁰ (previously presented): The method of claim 29, wherein a Distributed Administrator is a process manager for a process of an agent.

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Claim 36²⁰ (previously presented): The method of claim 29, wherein a Distributed Administrator is configured to spawn an agent, in response to an instruction from the Central Administrator.

²⁸
 Claim ³¹ (previously presented): The method of claim ³⁰,
 wherein the Distributed Administrator passes a
 configuration file to the agent, where the configuration
 file includes configuration information for the agent.

²⁹
 Claim ³⁸ (previously presented): The method of claim ²⁹,
 wherein the Central Administrator and Distributed
 Administrators perform crash recovery for a computer
 platform.

³⁰
 Claim ³⁹ (previously presented): The method of claim ²⁹,
 wherein a software component is a simplest addressable
 logical element within the business application.

³¹
 Claim ⁴⁰ (previously presented): The method of claim 1,
 wherein the agent sends heartbeat signals to the Central
 Administrator to indicate that the agent is available and
 sends health status messages to the Distributed
 Administrators, wherein the health status messages are
 associated with the containers and components of the agent.

Note: Redundancy
 is cancelled
 here, not claim
 40.

Claim 40 (cancelled): The method of claim 1, wherein the
 agent sends heartbeat signals to the Central Administrator
 to indicate that the agent is available and sends health
 status messages to the Distributed Administrators, wherein
 the health status messages are associated with the
 containers and components associated with the agent.

³²
 Claim ⁴¹ (previously presented): The method of claim ⁶,
 wherein the agent sends heartbeat signals to the Central

Administrator to indicate that the agent is available and sends health status messages to the Distributed Administrators, wherein the health status messages are associated with the containers and components associated with the agent.

³³
Claim ~~42~~ (new): The method of claim 1, wherein the agent sends the health status message to the Distributed Administrator at a regular interval.

³⁴
Claim ~~43~~ (new): The method of claim 1, wherein the process schedule check is performed by checking, by the Distributed Administrator, a process schedule table that indicates a status of the agent.